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**APPLICATION OF AERIAL PHOTOGRAPHS AND REMOTE SENSING
IMAGERY TO URBAN RESEARCH AND STUDIES (a revised
edition of Exchange Bibliography 119)**

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APPLICATION OF AERIAL PHOTOGRAPHS AND REMOTE SENSING IMAGERY

TO URBAN RESEARCH AND STUDIES,

A Revised Edition of Exchange Bibliography #119

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Since Exchange Bibliography #119 was published in 1970, numerous urban studies that utilized remote sensing techniques have been completed. Because of this, the original compilation has been updated to include all pertinent research published prior to March, 1971. This revised edition contains approximately 225 additional bibliographic entries over the 1970 edition or a total approaching 450. The urban oriented references are of two types:

(1) those where remote sensing imagery was used to solve a variety of metropolitan problems, and (2) studies that have revealed the potential of using remote sensing techniques in urban research. Unlike Volume I, a list of general references has also been included for those desiring non-technical descriptions of the various sensors plus their established and potential applications.

Recently several developments have occurred in the remote sensing field which will be of interest to those concerned with the urban environment. To act as additional outlets for the voluminous amounts of interdisciplinary remote sensing research being completed, two new journals have been introduced--

Remote Sensing of Environment¹ and the Journal of Remote Sensing²; both have

¹Remote Sensing of Environment is published by the American Elsevier Publishing Company, 52 Vanderbilt Avenue, New York, New York 10017. The single copy price is \$3.75 including postage. During 1970, four issues were published and these are available for \$28.00.

²The Journal of Remote Sensing is published by the International Remote Sensing Institute, 6151 Freeport Boulevard, Sacramento, California 95822. The subscription price is \$15.00 per year without benefit of membership.

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carried pertinent urban articles. As in the past, Photogrammetric Engineering continues to publish a "fair share" of urban oriented articles as do several multidisciplinary journals.

An increasing number of sensors, which were experimental a few short years ago, are now becoming operational. For urban studies this is especially true for color infrared and multispectral systems. It now appears that conventional color photography is declining in importance mainly because the film is extremely susceptible to Rayleigh and Mie scattering. By contrast, both of the previous sensors avoid the blue portion of the visible spectrum, thereby affording good haze penetration.

This penetration component became especially apparent following the Apollo 9 mission.³ During the flight, 127 sets of color infrared and multispectral image sets were taken over the southern portion of the United States. The imagery is characterized by a marked hue improvement over much of the Gemini and earlier Apollo color photography which was characterized by a blue overcast. Many frames from Apollo 9 centered on urban areas, and extensive work has been completed on the Phoenix imagery.

Thermal infrared's potential goes unopposed for detecting: (1) sources and/or distributions of heat pollution (e.g., sewage, industrial wastes) plus (2) sub-surface coal fires that plague several Pennsylvania cities. Large scale radar imagery offers tremendous potential for systematic data collections over metropolitan areas within the humid tropics. Side Looking Airborne Radar (SLAR) is the only imaging system that can penetrate clouds.

³For those desiring information on the Apollo 9 multispectral experiment see: Colwell, Robert N., Lowman, Paul D., and Wenderoth, Sandra. Apollo 9 Multispectral Photographic Information. NASA TM X-1957, Washington, D.C.: National Aeronautics and Space Administration, April, 1970.

Perhaps the most exciting development has been occurring within the EROS (Earth Resources Observation Satellite) Program of the U. S. Department of the Interior. This agency is engaged in an aircraft and spacecraft data collection effort to aid in natural resource and land use assessments. The current phase of the program centers on imagery acquisitions from sub-orbital altitudes, but the satellite phase commences in March, 1972, when ERTS-A (Earth Resources Technology Satellite) will be launched. The primary function of the satellite's remote sensors⁴ is to collect simultaneous multispectral imagery with a resolution that will enable various environmental phenomena to be identified. It is anticipated that the imagery will be extremely beneficial for metropolitan studies, and because of the repetitive coverage (every 18 days) feature of ERTS-A, patterns, distributions, and other aspects of the urban environment can hopefully be monitored.

The Geographic Applications Program (GAP) of the U. S. Geological Survey is concerned with developing remote sensing techniques that can be applied to urban analyses. Preparing for the imagery that will be generated by ERTS-A, GAP has been sponsoring high altitude multispectral missions (nine cameras) over 26 cities⁵ and four metropolitan regions.⁶ The cameras are sensing spectral bands that will be isolated by the ERTS-A sensors.

⁴The imaging sensors include a return beam vidicon multispectral camera and a multispectral scanner.

⁵Asheville, N.C.; Atlanta, Ga.; Aurora, Ill.; Boston, Mass.; Cedar Rapids, Iowa; Dallas, Texas; Denver, Col.; El Paso, Texas; Houston/Galveston, Texas; Lawrence, Kan.; Midland, Texas; New Haven, Conn.; New Orleans, La.; Peoria, Ill.; Phoenix, Az.; Pontiac, Mich.; Riverside/San Bernardino, Calif.; Salt Lake City, Utah; San Francisco, Calif.; San Juan, P.R.; Seattle, Wash.; Tampa, Fla.; Tucson, Az.; Washington, D.C.; West Palm Beach, Fla.; and Wichita Falls, Texas.

⁶Northeast Corridor--New England to Virginia, Gulf Coast--Houston to New Orleans, California's high population zone--San Francisco to San Diego, and the area comprising the Phoenix 1:250,000 quadrangle.

The future does indeed appear promising, and it is hoped that this bibliography will: (1) be useful for those seeking remote sensing information that pertains to urban research and (2) demonstrates that there are still many avenues of research that have yet to be explored. The author would appreciate knowing of any errata or suggestions for improving future compilations.

I. REMOTE SENSORS AND GENERAL APPLICATIONS

- Avery, T. Eugene. Interpretation of Aerial Photographs. Chapte 9, "Remote Sensing Techniques," 2nd ed. revised. Minneapolis, Minnesota: Burgess Publishing Co., 1968, 135-159.
- Badgley, Peter C., Leo Childs and William L. Vest. "The Application of Remote Sensing Instruments in Earth Resource Surveys," Geophysics, XXXII (August 1967), 583-601.
- Borchert, John R. "Remote Sensors and Geographical Science," The Professional Geographer, XX (November 1968), 371-375.
- Colwell, Robert N. "Remote Sensing of Natural Resources," Scientific American, CCXVIII (January 1968), 54-71.
- Lancaster, Jane. "Geographers and Remote Sensing," Journal of Geography, LXVII (May 1968), 301-310.
- Leonardo, Earl S. "Capabilities and Limitations of Remote Sensors," Photogrammetric Engineering, XXX (November 1964), 1005-1010.
- Parker, Dana C. "Some Basic Considerations Related to the Problem of Remote Sensing," in Proceedings of the First Symposium on Remote Sensing of Environment. 2nd ed., Ann Arbor: University of Michigan, 1964, 7-18.
- _____, and Michael F. Wolff. "Remote Sensing," International Science and Technology, No. 43 (July 1965), 20-31.
- Rabchevsky, George A. "Remote Sensing of the Earth's Surface--Fundamentals of Remote Sensing," Journal of Remote Sensing, I (June/July 1970), 15-17.
- _____. "Remote Sensing of the Earth's Surface--Remote Sensing and Sensors," Journal of Remote Sensing, I (August/September 1970), 5, 15-18.
- _____. "Remote Sensing of the Earth's Surface--Applications of Remote Sensor Data," Journal of Remote Sensing, I (November/December 1970), 14-17.
- Strandberg, Carl H. Aerial Discovery Manual. Chapter I, "Getting Acquainted with Aerial Reconnaissance," New York: John Wiley and Sons, Inc., 1967, 3-15.
- Weaver, Kenneth F. "Remote Sensing New Eyes to See the World," National Geographic, CXXXV (January 1969), 46-73.

II. REMOTE SENSING AND URBAN APPLICATIONS

- Abrams, Talbert. Essentials of Aerial Surveying and Photo Interpretation. New York: McGraw-Hill Book Co., Inc., 1944.
- Adams, W., L. Lepley, C. Warren, and S. Chang. "Coastal and Urban Surveys with IR," Photogrammetric Engineering, XXXVI (February 1970), 173-180.
- Aerospace Division. Side-Looking Radar Shows San Diego Bay. Reprint 6447, Baltimore, Maryland: Westinghouse Electric Corp., 1967.
- Alexander, Robert H. "Geographic Data from Space," The Professional Geographer, XVI (November 1964), 1-5.
- _____. "Geographic Research Potential of Earth Satellites," in Proceedings of the Third Symposium on Remote Sensing of Environment. 2nd ed., Ann Arbor: University of Michigan, 1965, 453-467.
- _____. "Multispectral Sensing of Urban Environments," in Five Papers on Remote Sensing and Urban Information Systems. Technical Report No. 1, 389-143, Washington, D.C.: Office of Naval Research, 1966, 8-9.
- _____. "Mission 73 and Associated Tests," in Earth Resources Aircraft Program Status Review. Vol. I, Part 3, Houston, Texas: Manned Spacecraft Center, 1968, 1-33.
- _____. Geographic Applications Program Reports Completed and in Preparation. Technical Letter NASA-154, Washington, D.C.: U. S. Geological Survey, 1969.
- _____. "Geography Program Review and Integration," in Second Annual Earth Resources Aircraft Program Status Review. Vol. I, Part 15, Houston, Texas: Manned Spacecraft Center, 1969, 1-23.
- _____, et al. "Remote Sensing of Urban Environments," in Proceedings of the Fifth Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1968, 889-912.
- _____, et al. "Geography: Comparison of Apollo 6 and 7 Photographs," in Science Screening Report of Apollo 7 Mission. NASA TM-X 580 29, Houston, Texas: Manned Spacecraft Center, 1969, 49-56.
- American Society of Planning Officials. Urban Mapping, Aerial Photography, and Duplicating: Some Basic Elements. Planning Advisory Service, Report No. 29, Chicago: American Society of Planning Officials, August 1951, (Mimeographed.)
- American Society for Engineering Education. Interdiscipline Research Topics in Urban Engineering. Washington, D.C.: American Society for Engineering Education, 1969.
- Anderson, James M. "Analytical Aerotriangulation Applied to Photogrammetric Mapping for Highway Design," Photogrammetric Engineering, XXVII (March 1961), 64-71.

- Anschutz, Glenn and Alvis H. Stallard. "An Overview of Site Evaluation," Photogrammetric Engineering, XXXIII (December 1967), 1381-1396.
- Anson, Abraham. "Photographic Interpretation from Space," in Manual of Color Aerial Photography. Edited by John T. Smith. Falls Church, Virginia: American Society of Photogrammetry, 1968, 412-413.
- Armed Forces Air Intelligence Training Center. Multisensor Reconnaissance: Advanced Imagery Interpretation Notes. Text TS-I-91, Lowry Air Force Base, Colorado: Armed Forces Intelligence Training Center, 1969.
- Arnold, Keith. "Examples of Urban and Regional Planning Requirements for Remote Sensing," in Useful Applications of Earth Oriented Satellites: Forestry-Agriculture-Geography. Washington, D.C.: National Academy of Sciences, 1969, 59.
- Aschmann, Homer. "Prolegomena to the Remote Sensing of Environmental Quality," The Professional Geographer, XXIII (January 1971), 59-63.
- Astro Electronics Division. Ground Data-Handling System Study for the Earth Resources Observation Satellite. Final Report, Princeton, New Jersey: Radio Corporation of America, 1969.
- Aukland, J. C., W. H. Conway, and N. K. Sanders. "Detection of Oil Slick Pollution on Water Surfaces with Microwave Radiometer Systems," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1970, 789-796.
- Avery, T. Eugene. "Measuring Land Use Changes on USDA Photographs," Photogrammetric Engineering, XXXI (July 1965), 620-624.
- _____. Guide to Aerial Photo Interpretation. Agricultural Handbook 308, Washington, D.C.: U. S. Government Printing Office, 1966.
- _____. Interpretation of Aerial Photographs. 2nd ed. revised, Minneapolis: Burgess Publishing Co., 1968.
- _____, and Dennis Richter. "An Airphoto Analysis Index to Physical and Cultural Features in the Eastern United States," Photogrammetric Engineering, XXXI (September 1965), 896-914.
- Badgely, Peter C. "Planetary Exploration from Orbital Altitudes," Photogrammetric Engineering, XXXII (February 1966), 250-259.
- _____. "Orbital Remote Sensing and Natural Resources," Photogrammetric Engineering, XXXII (September 1966), 780-790.
- Barr, D. J. and R. D. Miles. "SLAR Imagery and Site Selection," Photogrammetric Engineering, XXXVI (November 1970), 1155-1170.
- Barringer, A. R. "New Instrumentation and Techniques for Pollution Monitoring," in Proceedings of the Third Annual Conference, Remote Sensing of Air and Water Pollution. Section 3, Anaheim, California: North American Aviation, Inc., 1967, 1-16.

- Barringer, A. R. "Experimental Results in the Remote Sensing of Gases from High Altitudes," in Abstracts of Reports to be Presented at the Earth Resources Program-NASA Aircraft Project Second Annual Program Review. Houston, Texas: Manned Spacecraft Center, 1969, 67.
- _____, B. C. Newbury, and A. J. Moffat. "Surveillance of Air Pollution from Airborne and Space Platforms," in Proceedings of the Fifth Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1968, 123-156.
- Baussart, M. and H. Bonneval. "La Photographie Aérienne dans les Etudes D'Autoroutes," Société Française de Photogrammétrie, No. 27 (July 1967), 20-36.
- Bay, Charles A. "Hydrology," in Manual of Color Aerial Photography. Edited by John T. Smith. Falls Church, Virginia: American Society of Photogrammetry, 1968, 404-405.
- Belcher, Donald J. "The Five Facets of Aerial Photography," Photogrammetric Engineering, XIX (December 1953), 746-752.
- _____. "Successful Computerization for Resources Mapping," Journal of Remote Sensing, I (January/February 1970), 7-10.
- _____, et al. Beach Accessibility and Trafficability Studies from Photo Analysis. Vol. I-III, Washington, D.C.: Office of Naval Research, 1951.
- Berlin, G. Lennis. Waveform and Computer Analysis of Geographic Phenomena Recorded on Color and Color Infrared Multispectral Imagery from Aerial and Orbital Altitudes. Interagency Report NASA-155, Washington, D.C.: U. S. Geological Survey, 1969.
- _____. "Radar Mosaics," The Professional Geographer, XXIII (January 1971), 66.
- Betak, John F. Object Identification in Aerial Photographs: A Preliminary Report. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, April 1967.
- Bill, Joseph T. "The Use of Aerial Photography in Urban Planning," Photogrammetric Engineering, XVIII (September 1952), 760-762.
- Binsell, Ronald. Dwelling Unit Estimation from Aerial Photography. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, June 1967.
- Bird, J. B. and A. Morrison. "Space Photography and Its Geographical Applications," Geographical Review, LIV (March 1964), 464-486.
- Blythe, Richard and Ellen Kurath. "Infrared Images of Natural Subjects," Applied Optics, VII (September 1968), 1769-1777.
- Bock, Peter and J. H. Barmby. "Survey Effectiveness of Spacecraft Remote Sensors," Photogrammetric Engineering, XXXV (August 1969), 756-762.

- Bogue, Donald J. Needed Urban and Metropolitan Research. Scripps Foundation Studies in Population Distribution, Oxford, Ohio: Miami University, 1952.
- Borchers, Perry E. "Choice of Station and Control for Efficient Orientation and Plotting in Architectural Photogrammetry," Photogrammetric Engineering, XXVI (December 1960), 713-720.
- Borchert, John R. "Remote Sensors and Geographical Science," in Proceedings of the Fifth Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1968, 883-889.
- _____. "Remote Sensors and Geographical Science," The Professional Geographer, XX (November 1968), 371-375.
- Bowden, Leonard W. "Southern California Regional Resources Studies," in Earth Resources Aircraft Program Status Review. Vol. I, Part 4, Houston, Texas: Manned Spacecraft Center, 1968, 1-29.
- _____. Multi-Sensor Signatures of Urban Morphology. Function, and Evolution. Technical Report No. 2, Washington, D.C.: U. S. Geological Survey, 1968.
- _____. Imaging the Variable Environment, Selected Samples from the United States. Technical Report No. 3, Washington, D.C.: U. S. Geological Survey, 1968.
- _____. "Imperial Valley Land-Use Studies: A Continuum from Mission 73 to Apollo 9," in Abstracts of Reports to be Presented at the Earth Resources Program-NASA Aircraft Project Second Annual Program Review. Houston, Texas: Manned Spacecraft Center, 1969, 34.
- _____. "Remote Sensing of Southern California: An Attempt to Inventory a Geographic Region," Proceedings of the Association of American Geographers, II (1970), 17-21.
- _____. "Remote Sensing of Urban Environments in Southern California," in Papers from the 36th Annual Meeting. Falls Church, Virginia: American Society of Photogrammetry, 1970, 363-373.
- _____. "Remote Sensing of Urban Environments in Southern California," Photogrammetric Engineering, XXXVI (June 1970), 590.
- _____, and Robert H. Alexander. "Geographic Remote Sensing Tests in Southern California, Spring 1968," in Mission 73, Summary and Data Catalog. Technical Letter NASA-132, Houston, Texas: Manned Spacecraft Center, 1968, 1-29.
- _____, and Darryl R. Goehring. Remote Sensing in County Planning: A Case History from Los Angeles County. Technical Report No. 69-7, Washington, D.C.: U. S. Geological Survey, 1970.
- Branch, Melville C. Aerial Photography in Urban Planning and Research. Harvard City Planning Studies XIV, Cambridge: Harvard University Press, 1948.

- Brandenberger, Arthur J. "Aerotriangulation for Mapping Large Cities," Geodeticky A Kartograficky Obzer, XII (No. 8, 1966). (Czechoslovakia.)
- _____. "A Survey on (Photogrammetric) Surveying and Mapping on a World-Wide Basis," in Papers from the 35th Annual Meeting. Falls Church, Virginia: American Society of Photogrammetry, 1969, 320-328.
- Brantley, H. L. "The Use of Photography and Photogrammetry in the Solution of Urban Expressway Location Problems," in Papers from the 1969 ASP-ACSM Convention. Falls Church, Virginia: American Society of Photogrammetry and Washington, D.C.: American Congress on Surveying and Mapping, 1969, 31-35.
- Bunting, James and Donna Lamb. Heavy Snow in Chicago Area as Revealed by ESSA 3 Satellite Pictures. Satellite and Mesometeorology Research Project Paper No. 75, Chicago: University of Chicago, July 1968.
- Bureau of Public Roads. Specifications for Aerial Surveys and Mapping by Photogrammetric Methods. Washington, D.C.: U. S. Department of Commerce, 1958.
- Buringh, P. and A. P. A. Vink. Aerial Photo Interpretation in Land Use Surveys. Delft, Netherlands: Training Center for Aerial Surveys, 1962.
- Burnett, E. S. and P. G. White. "Water Pollution-The Role of Remote Sensing," Journal of Remote Sensing, I (June/July 1970), 9-13.
- Burry, M. G. "Air Survey Methods," The Town Planning Review, XXXVIII (1967), 135-151.
- Campbell, R. D. and H. L. Leblanc. An Information System for Urban Planning. Silver Springs, Maryland: Maryland-National Capital Park and Planning Commission, 1962.
- Carls, Norman. How to Read Aerial Photographs for Census Work. Washington, D.C.: U. S. Government Printing Office, 1947.
- Chaves, J. R. and R. L. Schuster. "Color Photos for Highway Engineering," Photogrammetric Engineering, XXXIV (April 1968), 375-379.
- Chisnell, Thomas C. and Gordan E. Cole. "Industrial Components-A Photo Interpretation Key on Industry," Photogrammetric Engineering, XXIV (September 1958), 590-602.
- Chopra, Kailash C. Advanced Photogrammetric Techniques for Highway Interchange Geometry. Final Technical Report, March 1967-January 1969, Columbus: Ohio State University, 1969.
- Cissna, Volney J., Jr. "Photogrammetry and Comprehensive City Planning for the Small Community," Photogrammetric Engineering, XXIX (July 1963), 681-684.
- Clawson, M. and C. L. Stewart. Land Use Information. Resources for the Future, Inc., Baltimore: Johns Hopkins Press, 1965.

- Collins, R. S. "Aurora, Colorado: A Geographical Analysis of a Denver Urban Fringe." Unpublished Master's thesis, Boulder: University of Colorado, 1953.
- Colner, Bernard J. "Aerial Photography in the Unified Information System," Highway Research Record, No. 142 (1966), 16-27.
- Colvocoresses, Alden P. "Cartography," in Abstracts of Reports to be Presented at the Earth Resources Program-NASA Aircraft Project Second Annual Program Review. Houston, Texas: Manned Spacecraft Center, 1969, p. 68.
- _____. Comparison of Basic Modes for Imaging the Earth. AIAA Paper No. 70-294, New York: American Institute of Aeronautics and Astronautics, 1970.
- Colwell, Robert N. (ed.). Manual of Photographic Interpretation. Falls Church, Virginia: American Society of Photogrammetry, 1960.
- _____. "Aerial Photography-A Valuable Sensor for the Scientist," American Scientist, LII (March 1964), 16-49.
- _____. "A Summary of the Uses and Limitations of Multispectral Remote Sensing," in Proceedings of the Third Annual Conference, Remote Sensing of Air and Water Pollution. Section 17, Anaheim, California: North American Aviation, Inc., 1967, 1-38.
- Committee on Geography. Spacecraft in Geographic Research. Publication 1353, Washington, D.C.: National Academy of Sciences-National Research Council, 1966.
- Committee on Photogrammetry and Aerial Surveys. "Results of the 1962 Questionnaire on Use of Aerial Surveys," Highway Research News, No. 6 (1963).
- Common, R. "The Sample Survey of Land Use in Greece, 1958," Geography, XLVII (No. 216, 1962), 299-301.
- Cooper, Robert A. "Application of Color Aerial Photography in Water Pollution Studies," in New Horizons in Color Aerial Photography. Falls Church, Virginia: American Society of Photogrammetry, and Washington, D.C.: Society of Photographic Scientists and Engineers, 1969, 99-106.
- Cordillo, Guardo L. and Raul B. Equiarte. "Urban Cadaster of the City of Chihuahua," Photogrammetric Engineering, XXXVI (June 1970), 592. (Abstract.)
- Crawford, Nicholas C. The Detection of Past Landscapes from Remote Sensor Data. Technical Report No. 2, Washington, D.C.: Office of Naval Research, 1967.
- _____. The Applications of Remote Sensor Data to Historical Geography-A Case Study of the Asheville Basin. Technical Report No. 3, Washington, D.C.: Office of Naval Research, 1967.

Cross, B. "Aerial Photographs-New Weapons Against Pollution," Chemical Engineering, LXIX (No. 4, 1962), 42.

Dacey, Michael F. A Model for the Areal Pattern of Retail and Service Establishments within an Urban Area. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1966.

_____, and Duane F. Marble. Some Comments on Certain Aspects of Geographic Information Systems. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1965.

Dalke, George W. Automatic Processing of Multispectral Images. Center for Research, Report No. 61-16, Lawrence: University of Kansas, 1966.

Davis, Allan S. "Aerial Aids to Planning," American City, LXXVII (1962), 108-111.

Davis, J. M. Uses of Aerial Photos for Rural and Urban Planning. Department of Agriculture Handbook No. 315, Washington, D.C.: U. S. Government Printing Office, 1966.

Dawe, H. G. "Aerial Survey-Colony of Hong Kong," Photogrammetric Record, VI (October 1969), 335-347.

Department of Agricultural Economics. Aerial Photo Interpretation of Land Use Changes, Background Studies Resources Development in the Tweed Forest District, Ontario. Ottawa: Department of Agriculture, 1963.

Dickerson, Lewis A. and Kessler Lockwood. "Integration of Photogrammetry with Engineering Surveys," Photogrammetric Engineering, XX (June 1954), 531-546.

_____, and Peter E. Warneck. "Comparative Accuracies of Field and Photogrammetric Surveys," Highway Research Record, No. 109 (1966), 49-58.

Dickins, Justin H. "Sky County! New System Developed for Traffic Data Acquisition," Traffic Engineering, XXXV (1964), 12-16.

Dill, Henry W., Jr. "Photo Interpretation in Flood Control Appraisal," Photogrammetric Engineering, XXI (March 1955), 112-114.

_____. "Airphoto Analysis in Outdoor Recreation: Site Inventory and Planning," Photogrammetric Engineering, XXIX (January 1963), 67-70.

_____. "Remote Sensing in Land Resource Inventory in the Urban Fringe Area," in Papers from the 36th Annual Meeting. Falls Church, Virginia: American Society of Photogrammetry, 1970.

_____. "Remote Sensing in Land Resource Inventory in the Urban Fringe Area," Photogrammetric Engineering, XXXVI (June 1970), 591. (Abstract.)

Douglas, Robert W. Application of Remote Sensing Techniques to Water-Oriented Outdoor Recreation Planning. Technical Report No. 69-2, Washington, D.C.: U. S. Geological Survey, 1970.

Doverspike, G. E., F. M. Flynn, and R. C. Heller. "Micro-densitometer Applied to Land Use Classification," Photogrammetric Engineering, XXXI (March 1965), 294-306.

Dueker, Kenneth J. Spatial Data Systems: Organization of Spatial Data. Technical Report No. 4, Washington, D.C.: Office of Naval Research, 1966.

_____. Spatial Data Systems: Systems Considerations. Technical Report No. 5, Washington, D.C.: Office of Naval Research, 1966.

_____. Spatial Data Systems: Special Topics. Technical Report No. 6, Washington, D.C.: Office of Naval Research, 1966.

Earnest, G. Brooks. "Cleveland's Use of Aerial Photography for City Mapping," Photogrammetric Engineering, XIV (December 1948), 528-532.

Egbert, Dwight. Calculation of Ground Street Lengths and Areas from Radar Measurements. Lawrence: Center for Research, University of Kansas, 1968. (Mimeographed.)

Eguiarte, Raul B. and Guardo L. Cordillo. "Urban Cadaster of the City of Chihuahua," in Papers from the 36th Annual Meeting. Falls Church, Virginia: American Society of Photogrammetry, 1970, 700-721.

Estes, John E. "Some Applications of Aerial Infrared Imagery," Annals of the Association of American Geographers, LVI (December 1966), 673-682.

_____. "Some Geographic Applications of Aerial Infrared Imagery," in Proceedings of the Fourth Symposium on Remote Sensing of Environment, 2nd ed., Ann Arbor: University of Michigan, 1966, 173-181.

_____, and Berl Golomb. "Monitoring Environmental Pollution," Journal of Remote Sensing, I (March/April 1970), 8-13.

Eyre, L. Alan. An Investigation by Remote Sensing of Vacant and Unutilized Land in an Urbanized Coastal Area of Southeast Florida. Technical Report No. 3, Washington, D.C.: U. S. Geological Survey, 1969.

_____. "Shanghai-World's Second City," The Professional Geographer, XXIII (January 1971), 28-30.

_____, Blossom Adolphus, and Monica Amiel. "Census Analysis and Population Studies," Photogrammetric Engineering, XXXVI (May 1970), 460-467.

Fagerland, E., B. Kleman, L. Sellin, and H. Svensson. "Physical Studies of Nature by Thermal Mapping," Earth-Science Reviews, VI (1970), 169-180.

Falkner, E. "Land Use Changes in Parkway School District," Photogrammetric Engineering, XXXIV (January 1968), 52-57.

Feder, Allen M. and Duke Ducote. "A New Family of Illuminants for Night and Spectral Color Aerial Photography," in New Horizons in Color Aerial Photography. Falls Church, Virginia: American Society of Photogrammetry, and Washington, D.C.: Society of Photographic Scientists and Engineers, 1969, 409-423.

- Fenton, Lawrence R. "Photogrammetry and the Land Surveyor," Surveying and Mapping, XXIX (December 1969), 677-678.
- Ferjung, Werner H. "Urban Energy Balance Climatology: A Preliminary Investigation of the City-Man System in Downtown Los Angeles," Geographical Review, LX (January 1970), 31-53.
- Fischer, William A. Use Factors Influencing the Design of Multi-Purpose Earth Resource Satellites. AIAA Paper No. ASI55, New York: American Institute of Aeronautics and Astronautics, 1968.
- _____. "The Infinite Variety of Land Resources," in Useful Applications of Earth Oriented Satellites: Forestry-Agriculture-Geography. Washington, D.C.: National Academy of Sciences, 1969, 60-62.
- _____. Projected Uses of Observations of the Earth from Space-The EROS Program of the Department of the Interior. AIAA Paper No. 70-332, New York: American Institute of Aeronautics and Astronautics, 1970.
- Forte, Louis, Jr. "Color Aerial Photography in Transportation Analysis," in New Horizons in Color Aerial Photography. Falls Church, Virginia: American Society of Photogrammetry, and Washington, D.C.: Society of Photographic Scientists and Engineers, 1969, 191-195.
- Fraga, Gilbert W. "An Experiment in Aerial Surveillance of Pollution Indices at Lake Tahoe," in Proceedings of the Third Annual Conference, Remote Sensing of Air and Water Pollution. Section 14, Anaheim, California: North American Aviation, Inc., 1967, 1-9.
- Freiterer, J. and J. I. Taylor. "Traffic Flow Investigations by Photogrammetric Techniques," Highway Research Record, No. 142 (1966), 1-12.
- Garrison, W. L. "Demands for Small-Area-Data," in Five Papers on Remote Sensing and Urban Information Systems. Technical Report No. 1, Washington, D.C.: Office of Naval Research, 1966, 1-3.
- _____, E. N. Thomas and Worrall. Data System Requirements of Urban and Regional Policy Models. Research Report, Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1966.
- Gerlach, Arch C. "Summary of Objectives and Progress in the Geographic Applications Program," in Second Annual Earth Resources Aircraft Program Status Review. Vol. I, Part 2, Houston, Texas: Manned Spacecraft Center, 1969, 1-12.
- Giever, Paul M. "Needs for Remote Sensing Data in the Field of Air and Water Pollution Control," in Proceedings of the Fourth Symposium on Remote Sensing of Environment. 2nd ed., Ann Arbor: University of Michigan, 1966, 21-23.
- Gospodinov, G. V. "The Application of Aerial Photography to Geographical Research," Itogi Nauki: Kartografiya, (1964), 38-48.

- Green, Norman E. "Aerial Photography in the Analysis of Urban Structure, Ecological and Social." Unpublished Ph.D. dissertation, Chapel Hill: University of North Carolina, 1955.
- _____. "Scale Analysis of Urban Structures: A Study of Birmingham, Alabama," American Sociological Review, XXI (February 1956), 8-13.
- _____. "Aerial Photographic Interpretation and the Social Structure of the City," Photogrammetric Engineering, XXIII (March 1957), 89-96.
- _____. "Comments on Mr. Witenstein's Review of 'Aerial Photographic Interpretation and the Social Structure of the City,'" Photogrammetric Engineering, XXIII (March 1957), 99.
- _____, and Robert B. Monier. Reliability and Validity of Air Reconnaissance as a Collection Method for Urban Demographic and Sociological Information. Technical Report No. 11, Air University: U. S. Air Force, 1953.
- _____. "Report on Working Group 5, Interpretation of Urban, Rural, and Industrial Structures in Interim Progress Report for Commission VII," Photogrammetric Engineering, XXV (March 1959), 128-130.
- _____. "Aerial Photographic Interpretation and the Human Ecology of the City," Photogrammetric Engineering, XXV (December 1959), 770-773.
- Greenshields, B. D. "The Photographic Method of Studying Traffic Behavior," Highway Research Board Proceedings, No. 13 (1933), 382-399.
- Griffith, S. V. (moderator). "Panel on Direct Applications of Remote Sensing to Urban, Rural, and Regional Planning," in Papers from the 35th Annual Meeting. Falls Church, Virginia: American Society of Photogrammetry, 1969, 245.
- Hadfield, Samuel M. An Evaluation of Land Use and Dwelling Unit Data Derived from Aerial Photography. Report No. UR-1, Chicago: Chicago Area Transport Study, 1963.
- Halitsky, J. "Single-Camera Measurement of Smoke Plumes," International Journal of Air and Water Pollution. IV (1961), 185-198.
- Hannah, John W. A Feasibility Study for the Application of Remote Sensors to Selected Urban and Regional Land Use Planning Studies. Technical Report No. 11, Washington, D.C.: Office of Naval Research, 1967.
- Harrel, David E., C. Nicholas, and Robert Peplies. "Remote Sensor Returns as Historical Documents," in Proceedings of the Fourth Symposium on Remote Sensing of Environment. 2nd ed., Ann Arbor: University of Michigan, 1966, 599-603c.
- Harris, David E. and Caspar L. Woodbridge. Terrain Mapping by Use of Infrared Radiation. State College, Pennsylvania: HRB-Singer, Inc., 1963.

- Hazard, T. A. "Photographic Atlas of Alaskan Communities," in Papers from the 1969 ASP-ACSM Fall Convention. Falls Church, Virginia: American Society of Photogrammetry, and Washington, D.C.: American Congress on Surveying and Mapping, 1969, 93-100.
- Heath, Gordon R. "An Associative Method of Regional Photo Interpretation," Photogrammetric Engineering, XXI (September 1955), 589-598.
- _____. "A Comparison of Two Basic Theories of Land Classification and Their Adaptability to Regional Photo Interpretation Key Techniques," Photogrammetric Engineering, XXII (March 1956), 144-168.
- _____. "Correlation between Man's Activity and His Environment which May be Analyzed by Photo Interpretation," Photogrammetric Engineering, XXIII (March 1957), 108-114.
- Heller, Robert C. "Large-Scale Photo Assessment of Smog-Damaged Pines," in New Horizons in Color Aerial Photography. Falls Church, Virginia: American Society of Photogrammetry, and Washington, D.C.: Society of Photographic Scientists and Engineers, 1969, 85-98.
- Henderson, Floyd M. "Consistency of Road Network Detection Using Color Space Photography." Unpublished Master's thesis, Lawrence: University of Kansas, 1970.
- _____, and D. S. Simonett. "Space Photography as a Tool in Delimiting Transportation Networks," in Proceedings of the Association of American Geographers, II (1970), 71-73.
- Herbert, Ray. "Infrared Photography Is Tool for Urban Planning," The Arizona Republic. May 31, 1970, 14k.
- Holter, Marvin R. "Imaging with Nonphotographic Sensors," Remote Sensing. Chapter 3, Washington, D.C.: National Academy of Sciences, 1970, 73-163.
- Holz, Robert K., David L. Huff, and Robert C. Mayfield. "A Study of Urban Spatial Structure Based on Remote Sensing Imagery," in Final Report of the AAG Commission on Geographic Applications of Remote Sensing for May 1968-May 1969. Washington, D.C.: Association of American Geographers, 1969.
- _____. "Urban Spatial Structure Based on Remote Sensing Imagery," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment, Ann Arbor: University of Michigan, 1970, 819-830.
- Hom, Leonard W. "Remote Sensing of Water Pollution," Journal of Water Pollution Control Federation, XL (October 1968), 1728-1738.
- Honea, Robert B. The Derivation of Trade Areas and Traffic Flows from Remote Sensing Imagery. Technical Report No. 15, Washington, D.C.: Office of Naval Research, 1969.

- Horton, Frank E. and John Campbell. Study of Central Place Systems Using Side-Looking Radar. Technical Report, Washington, D.C.: U. S. Geological Survey, 1969.
- _____, and Duane F. Marble. "Regional Information Systems: Remote Sensing Inputs," in Papers from the 35th Annual Meeting. Falls Church, Virginia: American Society of Photogrammetry, 1969, 259-268.
- _____. "Housing Quality in Urban Areas: Data Acquisition and Classification Through the Analysis of Remote Sensor Imager," in Second Annual Earth Resources Aircraft Program Status Review. Vol. I, Part 15, Houston, Texas: Manned Spacecraft Center, 1969, 1-13.
- Howes, W. I. Photogrammetric Analysis of Traffic Flow Characteristics on Multilane Highways. Lafayette, Indiana: Purdue University, 1963.
- _____, and R. D. Miles. Aerial Photography Applied to Traffic Studies. Lafayette, Indiana: Purdue University, 1964.
- Howlett, Bruce F. "Determining Urban Growth and Changes from Aerial Photograph Comparison," Highway Research Record, No. 19 (January 1963), 1-16.
- Hsu, Shin-yi. "Intercensus Population Estimation by the Use of Air Photos and U.S.G.S. Topographic Maps: A Sample Study of Population Change in the Atlanta Area," in Papers from the 36th Annual Meeting. Falls Church, Virginia: American Society of Photogrammetry, 1970, 343-350.
- _____. "Summary of Inter-Census Population Estimation by the Use of Air Photos and U.S.G.S. Topographic Maps: A Sample Study of Population Change in the Atlanta Area," Photogrammetric Engineering, XXXVI (June 1970), 593. (Abstract.)
- Information Office. Earth Resources Observation Satellite. Washington, D.C.: U. S. Geological Survey, 1966.
- _____. Earth Resources Observation Satellite Program: Selected Press Clippings. Washington, D.C.: U. S. Geological Survey, 1966.
- International Business Machines Corporation. ORL Experiment Program. Vol. B, Part 4, Geography, Federal Systems Division, Rockville, Maryland: International Business Machines Corp., 1966.
- James, Wesley and Fred J. Burgess. "Ocean Outfall Dispersion," Photogrammetric Engineering, XXXVI (December 1970), 1241-1250.
- Jeffers, J. N. R. "The Use of Electronic Computers in Land-Use Surveys Based on Photo Interpretation," The Photogrammetric Record, V (May 1967), 465-473.
- Jimenez, B. "Some Results of Inflight Testing an Infrared Sensor as a Clear Air Turbulence Detector," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1970, 308-326.

- Joerg, W. L. G. "The Use of Airplane Photography in City Geography," Annals of the Association of American Geographers, XIII (1923), 211.
- Johnson, A. N. "Maryland Aerial Traffic Density Survey," Highway Research Board Proceedings, XXVII (1947), 291-296.
- Jordan, Thomas D. "Sky Count of Traffic Congestion and Demand," Traffic Engineering and Control, VII (1965), 312-315.
- _____. "Development of the Sky Count Technique for Highway Traffic Analysis," Highway Research Record, No. 19 (January 1963), 35-46.
- Kelland, M. C. M. "The Use of Aerial Photographs in the Delimitation of the Central Business District." Unpublished Master's thesis, Worcester, Massachusetts: Clark University, 1954.
- Kellom, John. "An Evaluation of Remote Sensing Methods for the Geographic Analysis of Water Pollution in the Mohawk and Upper Hudson Rivers." Unpublished Master's thesis, Syracuse, New York: Syracuse University, 1970.
- Kesseli, John E. "Use of Air Photographs by Geographers," Photogrammetric Engineering, XVIII (September 1952), 737-742.
- Kilston, Steven D., Robert R. Drummond, and Carl Sagan. "A Search for Life on Earth at Kilometer Resolution," Icarus, V (January 1966), 79-98.
- King, George D., Jr. "Aerial Photogrammetry and Municipal Engineering," Photogrammetric Engineering, XX (December 1954), 789-792.
- Kislov, V. V. "A Note on the Interpretation of Village Settlements," Miigaik, XLIX (1962), 51-54.
- Knuth, W. M. "Using an Airborne Infrared Imaging System to Locate Subsurface Coal Fires in Culm Banks," in Proceedings of the Pennsylvania Academy of Science, XLII (1968), 152-156.
- Kock, B. H. "Photogrammetry-Key to Engineering Planning of the Cincinnati Metropolitan Area," Photogrammetric Engineering, XX (June 1954), 544-546.
- Kohn, Clyde F. and William E. Powers. A Selective Essay Key for the Photo Identification of Coastal Features and Associated Settlement Patterns in a Glaciated New England Area. Evanston, Illinois: Department of Geography, Northwestern University, 1958.
- Landen, David. "Photomaps for Urban Planning," Photogrammetric Engineering, XXXII (January 1966), 136-146.
- Landis, Glenn H. "The Remote Sensing and Interpretation Division," Photogrammetric Engineering, XXXVI (May 1970), 498-499.
- Latham, James P. "Instrumentation of Image Analysis and Television Simulation Techniques," in Earth Resources Aircraft Program Status Review, Vol. I, Part 9, Houston, Texas: Manned Spacecraft Center, 1968, 1-29.

- Latham, James P. A System for Simulating Orbital TV Observation of Geographic Patterns. Technical Report No. 5, Washington, D.C.: U. S. Geological Survey, 1969.
- _____. Interpreting Geographic Patterns in Simulative TV Imagery. Technical Report No. 6, Washington, D.C.: U. S. Geological Survey, 1969.
- Latham, Ernest H. "Progress in Application of Remote Sensing Techniques to Marine Geology and Hydrology," in Earth Resources Aircraft Program Status Review. Vol. I, Part 17B, Houston, Texas: Manned Spacecraft Center, 1968, 1-2.
- Lee, Willis T. The Face of the Earth as Seen from the Air: A Study in the Application of Airplane Photography to Geography. New York: American Geographical Society, 1922.
- Lenton, David. Air Photographs in Geographical Research. Bulletin No. 17, Manchester, England: Manchester Geographical Association, 1947.
- LeSchack, Leonard A. "The Use of Color and Ektachrome Infrared Aerial Photography to Predict Land-Clearing Costs in Tropical and Temperate Regions," in New Horizons in Color Aerial Photography. Falls Church, Virginia: American Society of Photogrammetry, and Washington, D.C.: Society of Photographic Scientists and Engineers, 1969, 185-190.
- Leuder, D. R. Aerial Photographic Interpretation-Principles and Applications. New York: McGraw-Hill Book Co., Inc., 1959.
- Lewis, Anthony J. Evaluation of Multiple Polarized Radar Imagery for the Detection of Selected Cultural Features. Interagency Report NASA-130, Washington, D.C.: U. S. Geological Survey, October 1968.
- _____, Harold C. MacDonald, and David S. Simonett. "Detection of Linear Cultural Features with Multipolarized Radar Imagery," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1970, 879-884.
- Lindgren, David T. Dwelling Unit Estimation from Color Infrared Photography. Paper No. 1, Hanover, New Hampshire: Dartmouth College, 1970.
- Lindskog, L. "Airphotos as Aids in Certain Civilian Activities," Svensk Lantmateudskrift, (Sweden), 1953.
- Low, M. J. D. "Remote Sensing and Characterization of Stack Gases by Infrared Spectroscopy: New Approaches Using Multiple-Scan Interferometry," in Proceedings of the Third Annual Conference, Remote Sensing of Air and Water Pollution. Section 5, Anaheim, California: North American Aviation, Inc., 1967, 1-11.
- Lowe, D. S. and P. G. Hasell. "Multispectral Sensing of Oil Pollution," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1970, 755-765.
- Lynch, Kevin. "The Form of Cities," Scientific American, CXCVIII (April 1954), 53-63.

- MacConnell, William and G. P. Stoll. Use of Aerial Photographs to Evaluate the Recreation Resources of the Connecticut River. Bulletin No. 573, University of Massachusetts: Experiment Station College of Agriculture, 1968.
- MacDowall, Joseph and Andrew Moffet. "Survey of NO₂ and SO₂ over the Los Angeles Basin," in Mission 73 Summary and Data Catalog. Technical Letter NASA-132, Houston, Texas: Manned Spacecraft Center, 1968, 89-130.
- Macfadden, Cliffors H. "Some Preliminary Notes on the Use of the Light Airplane and 35mm Camera in Geographic Field Research," Annals of the Association of American Geographers, XXXIX (September 1949), 188-200.
- _____. "The Uses of Aerial Photographs in Geographic Research," Photogrammetric Engineering, XVIII (September 1952), 732-737.
- MacPhail, Donald and Louis Campbell, Jr. The El Paso (Texas-New Mexico) Study Area: A Comparative Analysis of Gemini 5 and Apollo 6 and 9 Space Photography. Technical Report No. 69-8, Washington, D.C.: U. S. Geological Survey, 1970.
- _____, Albert W. Smith, and Donald E. Vermeer. "Transportation Network and Photography from Space," in Earth Resources Surveys from Spacecraft. Vol. I, Part D, Fort Belvoir, Virginia: U. S. Army Corps of Engineers, 1967, 35.
- _____. "Potential Applications and Benefits of Satellite Photography," in Earth Resources from Spacecraft. Vol. II, Part H, Fort Belvoir, Virginia: U. S. Army Corps of Engineers, 1967, 3-5.
- Mandys, B. and V. Paspisil. "Experiences with Photogrammetric Plotting in Urban Areas at a Scale of 1:2,000," Geodeticky A Kartograficky Obzor (Czechoslovakia), XII (No. 10, 1966).
- Manji, A. S. The Uses of Conventional Aerial Photography in Urban Areas: A Review. Technical Letter NASA-131, Washington, D.C.: U. S. Geological Survey, 1968.
- _____, and Eric Moore. A Method of Evaluating the Cost Effectiveness of Remote Sensing Systems for Urban Data Collection. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1969.
- Marble, Duance F. "Urban Data Acquisition and Analysis," in Mission 73, Summary and Data Catalog. Technical Letter NASA-132, Houston, Texas: Manned Spacecraft Center, 1968, 253-256.
- _____, and Frank E. Horton. "Remote Sensing and the Study and Planning of Urban Areas," in Earth Resources Aircraft Program Status Review. Vol. I, Part 7, Houston, Texas: Manned Spacecraft Center, 1968, 1-9.
- _____. "Results Acquired from the Use of Data from NASA Aircraft," in Earth Resources Aircraft Program Status Review, Vol. I, Part 7B, Houston, Texas: Manned Spacecraft Center, 1968, 1-2.

- Marble, Duane F. "Remote Sensing: A New Tool for Urban Data Acquisition," in Papers from the Sixth Annual Conference of the Urban and Regional Information Systems Association. Kent, Ohio: Kent State University, 1968, 252-257.
- _____. "Housing-Quality Identification Via Remote Sensing," in Abstracts of Reports to be Presented at the Earth Resources Program-NASA Aircraft Project Second Annual Program Review. Houston, Texas: Manned Spacecraft Center, 1969, 35.
- _____. "Extraction of Urban Data from High and Low Resolution Images," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1970, 807-818.
- Marble, Duane F. and Edwin N. Thomas. "Some Observations of the Utility of Multispectral Photography for Urban Research," in Proceedings of the Fourth Symposium on Remote Sensing of Environment. 2nd ed., Ann Arbor: University of Michigan, 1966, 135-144.
- Marlatt, W. E. "Application of Remote Sensing Technology," in Environmental Analysis by Remote Sensing. Section 2, Fort Collins: Colorado State University, 1968, 1-19.
- Marschner, F. J. Land Use and Its Patterns in the United States. U. S. Department of Agriculture Handbook 153, Washington, D.C.: U. S. Government Printing Office, 1959.
- Matthes, G. H. "Aerial Surveys for City Planning," Transactions, American Society of Civil Engineers, XCI (1927), 314-325.
- Maxfield, Donald W. "Traffic Data Via Photo Interpretation," in Papers from the 1969 ASF-ACSM Fall Convention. Falls Church, Virginia: American Society of Photogrammetry, and Washington, D.C.: American Congress on Surveying and Mapping, 1969, 184-190.
- Maynard, Pate. A Feasibility Study of Remote Sensor Applications to Urban and Regional Transportation Planning. Technical Report No. 10, Houston, Texas: Manned Spacecraft Center, 1969.
- McCarthy, P. F. "Aerial Photography Aids Traffic Study," Traffic Engineering and Control, VI (1964), 358-360.
- McCasland, W. T. "Comparison of Two Techniques of Aerial Photography for Application in Freeway Traffic Operation Studies," Highway Research Record, No. 56 (1965), 95-115.
- McCormick, Robert A. "Meteorology and Urban Air Pollution," Meteorological Organization Bulletin, XVIII (July 1969), 155-165.
- McNulty, R. P. "The Effect of Air Pollutants on Visibility in Fog and Haze at New York City," Atmospheric Environment, II (November 1968), 625-628.
- Merifield, P. M., et al. "Satellite Imagery of the Earth," Photogrammetric Engineering, XXXV (July 1969), 654-668.

- Moffat, A. J. and A. R. Barringer. "Recent Progress in the Remote Detection of Vapours and Gaseous Pollutants," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1970, 379-414.
- Moore, Eric G. Multispectral Photography in Urban Research. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1966.
- _____. Remote Sensor Imagery in Urban Research: Some Potentialities and Problems. Interagency Report NASA-118, Washington, D.C.: U. S. Geological Survey, 1967.
- _____. Side-Looking Radar in Urban Research: A Case Study. Interagency Report NASA-138, Washington, D.C.: U. S. Geological Survey, 1968.
- _____. Multiband Photography and Urban Data Collections: Some Comments on Applied Research. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1968.
- _____. A Note on Applications of Remote Sensing Techniques to Basic Research in Urban Geography. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1969.
- _____. Assignment of Housing Aggregates to Quality Classes: The Potential of Photographic Sensors. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1969.
- _____. "Application of Remote Sensors to the Classification of Areal Data at Different Scales: A Case Study in Housing Quality," Remote Sensing of Environment, I (March 1970), 109-121.
- _____, John F. Betak, Barry S. Wellar, and Ashraf S. Manji. Comments on the Definition and Measurement of Housing Quality. Research Report No. 46, Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1968.
- Moore, Eric G. and Barry S. Wellar. Remote Sensor Imagery in Urban Research: Some Potentialities and Problems. Interagency Report NASA-118, Washington, D.C.: U. S. Geological Survey, 1967.
- _____. Experimental Applications of Multiband Photography in Urban Research. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1968.
- _____. "Experimental Applications of Multiband Photography in Urban Research," Transactions of the Illinois State Academy of Science, LXI (1968), 80-88.
- _____. "Urban Data Collection by Airborne Sensor," Journal of the American Institute of Planning, XXXV (January 1969), 34-43.
- Moore, Richard K. and David S. Simonett. Potential Research and Earth Resource Studies with Orbiting Radars: Results of Recent Studies. AIAA Paper 67-767, New York: American Institute of Aeronautics and Astronautics, 1967.

- Moxham, R. M. and Gordan W. Greene. Aerial Infrared Reconnaissance of the Steamboat Springs Area, Nevada. Open File Report, Washington, D.C.: U. S. Geological Survey, 1968.
- Mullens, Robert H. "Urban Area Analysis from Side Looking Aerial Radar Imager," in Multi-Sensor Signatures of Urban Morphology, Function, and Evolution. Technical Report No. 2-Revised, Washington, D.C.: U. S. Geological Survey, 1968, 30-37.
- _____. Analysis of Urban Residential Environments Using Color Infrared Aerial Photography-An Examination of Socioeconomic Variables and Physical Characteristics of Selected Areas in the Los Angeles Basin. Technical Letter NASA-153, Washington, D.C.: U. S. Geological Survey, 1969.
- Mumbower, L. E. and J. Donoghue. "The Use of Aerial Photography to Obtain Socio-Economic Information-A Study of Urban Poverty," Photogrammetric Engineering, XXXIII (June 1967), 610-618.
- National Aeronautics and Space Administration. "Geographic Data from Space," in Proceedings of the Conference on the Use of Orbiting Spacecraft in Geographic Research. Houston, Texas: Manned Spacecraft Center, January 1965.
- _____. Earth Resources Program Synopsis of Activity. Houston, Texas: Manned Spacecraft Center, March 1970.
- Nelson, Howard J. "The Spread of an Artificial Landscape over Southern California," Annals of the Association of American Geographers, IL (September 1959), 80-99.
- Neumaier, Gerhardt and Frank Silvestro. "Measurement of Pollution Using Multiband and Color Photography," in New Horizons in Color Aerial Photography. Falls Church, Virginia: American Society of Photogrammetry and Washington, D.C.: Society of Photographic Scientists and Engineers, 1969, 47-58.
- Newbury, B. C. "The Use of Correlation Spectrometer in the Study and Control of Air Pollution," in Proceedings of the Third Annual Conference, Remote Sensing of Air and Water Pollution. Part 4, Anaheim, California: North American Aviation, Inc., 1967, 1-14.
- Newcomb, Robert M. Remote Sensing: A New Source of Geographic Data. NR. 25, Ved Aarhus Universitet: Skrifter Fra Geografisk Institut, 1969.
- Nunnally, Nelson R. Radar as a Tool for Regional Investigations. Interagency Report NASA-76, Washington, D.C.: U. S. Geological Survey, 1966.
- _____, and Richard E. Witmer. A Strategy for Developing Classification of Land Use as Interpreted from Remote Sensor Imagery. Technical Report No. 1, Washington, D.C.: U. S. Geological Survey, 1968.
- _____. A Land Use Interpretation Experiment. Technical Report No. 69-5, Washington, D.C.: U. S. Geological Survey, 1970.
- _____. "Remote Sensing for Land-Use Studies," Photogrammetric Engineering XXXVI (May 1970), 449-453.

- Office of Space Science and Applications. "Geography: Nile Delta Settlements, Land and Water Use," in Ecological Surveys from Space. Chapter 2, NASA SP-230, Washington, D.C.: National Aeronautics and Space Administration, 1970, 5-12.
- _____. "Cartography: Transportation Facilities Cities and Atolls," in Ecological Surveys from Space. Chapter 8, NASA SP-230, Washington, D.C.: National Aeronautics and Space Administration, 1970, 61-73.
- Ory, Thomas R. "Line-Scanning Reconnaissance Systems in Land Utilization and Terrain Studies," in Proceedings of the Third Symposium on Remote Sensing of Environment. 2nd ed., Ann Arbor: University of Michigan, 1965, 393-398.
- Oswald, William J. "Remote Sensing Data and Evaluation of Water Quality," in Proceedings of the Third Annual Conference, Remote Sensing of Air and Water Pollution. Section 15, Anaheim, California: North American Aviation, Inc., 1967, 1-12.
- Padilla, Salvador M. "Aerial Photots and Highway Engineering," Photogrammetric Engineering, XX (December 1954), 792-796.
- Paludan, Charles T. N. Potential Contribution of Orbital Earth Resources Data to Urban Planning. Presented at the American Astronautical Society and Operations Research Society of America, Denver, 1969, AAS Paper No. 69-483.
- Pascucci, Richard F., Edward T. Huffman, and Charles Bay. Analysis of Multi-Sensor Data for Office of Emergency Preparedness Purposes. Alexandria, Virginia: Autometric Operation-Raytheon Co., 1968.
- Pascucci, Richard F. and Gary W. North. USGS/NASA Southern California Remote Sensing Program: Mission Summary and Data Catalog. Interagency Report NASA-132, Alexandria, Virginia: Autometric Operation, Raytheon Co., 1968.
- Pascucci, Richard F., Gary W. North, Rose Anne Albrizio, and Barry D. Shelkin. Geographic Analysis of Multiple Sensor Data from the NASA/USGS Earth Resources Program. Interagency Report NASA-156, Alexandria, Virginia: Autometric Operation, Raytheon Co., 1969.
- Pascucci, Richard F. "Sensor Capability Analysis," in New Horizons in Color Aerial Photography. Falls Church, Virginia: American Society of Photogrammetry, and Washington, D.C.: Society of Photographic Scientists and Engineers, 1969, 235-245.
- Pate, Maynard. A Feasibility Study of Remote Sensor Application to Urban and Regional Transportation Planning. Technical Report No. 10, Washington, D.C.: Office of Naval Research, 1967.
- Pease, Robert W. "Color Infrared Film-A Boom to Geographers Who Fly," Annals of the Association of American Geographers, II (March 1969), 199.
- _____, and Leonard W. Bowden. Making Color Infrared Film a More Effective High Altitude Sensor. Technical Letter NASA-117, Washington, D.C.: U. S. Geological Survey, 1968.

- Pease, Robert W. "Making Color Infrared Film a More Effective High Altitude Sensor," Remote Sensing of Environment, I (March 1969), 23-30.
- Peplies, Robert. "Land Use and Regional Analysis," in Earth Resources Aircraft Program Status Review. Vol. I, Part 5, Houston, Texas: Manned Spacecraft Center, 1968, 1-16.
- _____. "Information Concerning Overflight Data Over the Asheville Basin Test Site (Site 46)," in Earth Resources Aircraft Program Status Review. Vol. I, Part 5A, Houston, Texas: Manned Spacecraft Center, 1968, 1-3.
- Permiten, V. Y. and A. S. Sudakov. "Application of Small Aerial Cameras to the Compilation of 1:25,000 Scale Topographic Maps," Geodeziya i Kartografiva, No. 7 (1968), 46-52.
- Peterson, Florence. "An Urban Land Use Study of Lawrence, Kansas, Using K-Band Radar," in The Utility of Radar and Other Remote Sensors in Thematic Land Use Mapping from Spacecraft, Annual Report. Interagency Report NASA-140, Washington, D.C.: U. S. Geological Survey, 1969, 38-45.
- Peterson, Rex M. "Observations on the Geomorphology and Land Use of the Wasatch Range, Utah," in The Utility of Radar and Other Remote Sensors in Thematic Land Use Mapping from Spacecraft, Annual Report. Interagency Report NASA-140, Washington, D.C.: U. S. Geological Survey, 1969, 75-113.
- Pilonero, Joseph T. "Research on Orthophotomaps for Metropolitan Areas," in Papers from the 35th Annual Meeting. Falls Church, Virginia: American Society of Photogrammetry, 1969, 390-397.
- Pitkin, Francis A. "Aerial Photography for State and Local Planning," Photogrammetric Engineering, XIV (December 1948), 532-535.
- Pluhowski, E. J. "Effects of Urban Development on the Hydrology of Long Island, New York," in Earth Resources Aircraft Program Status Review. Vol. III, Part 21, Houston, Texas: Manned Spacecraft Center, 1968, 1-9.
- Porter, Philip W. "Population Distribution and Land Use in Liberia." Unpublished Ph.D. dissertation, London: University of London, 1957.
- _____. "Liberian Land Use," in Atlas International de l'Quest African. Dakar, Senegal: Institut Fonfamental d'Afrique Noire, 1968.
- Pownall, L. L. "Aerial Photographic Interpretation of Urban Land Use in Madison, Wisconsin," Photogrammetric Engineering, XVI (June 1950), 414-426.
- _____. "Aerial Photographic Interpretation of Aerial Photography to Urban Land-Use Inventory, Analysis, and Planning," Photogrammetric Engineering, XXII (September 1956), 656-663.
- Pratt, Walden P. Infrared Imagery of Loudsburg-Silver City Area, New Mexico. Interagency Report NASA-71, Washington, D.C.: U. S. Geological Survey, No Date.

- Prentice, Virginia. "Geographic Interpretation of a Radar Image," Annals of the Association of American Geographers, LVII (March 1967), 187.
- Prochaska, Joseph M. "The Application of Remote Sensing in the Urban Environment," in Papers from the 35th Annual Meeting. Falls Church, Virginia: American Society of Photogrammetry, 1969, 246-246j.
- Pryor, William T. "Highway Engineering Applications of Photogrammetry," Photogrammetric Engineering, XX (June 1954), 523-531.
- Quam, Louis O. "The Application of Photo-Interpretation to Geographic Research," Photogrammetric Engineering, XVIII (1952), 500-501.
- Randerson, Darryl. "A Study of Air Pollution Sources as Viewed by Earth Satellites," APCA Journal, XVIII (April 1963), 249-253.
- Rawson, E. R. and K. K. Sealy. "Air Photographs and Land-Utilization Maps," Geography, XLII, Part 1, No. 195 (1957), 600-631.
- Reeves, Francis B. "Mensuration: Color vs. Pan," Photogrammetric Engineering, XXXVI (March 1970), 239-244.
- Remes, E. "On the Use of Maps in General and Specifically of Orthophotomaps in Regional Planning," The Photogrammetric Journal of Finland, III (No. 2, 1969).
- Rex, R. L. Evaluation and Conclusion of Assessing and Improvement Control by Aerial Assessment and Interpretation Methods. Chicago: Sidwell Studio, Inc., 1963.
- Rib, H. T. "Utilization of Photo Interpretation in the Highway Field," Highway Research Record, No. 109 (1966), 18-26.
- _____. "Remote Sensing Applications to Highway Engineering," in Proceedings of the Fifth Symposium on Remote Sensing of Environment, Ann Arbor: University of Michigan, 1968, 725-736.
- Rice, Joseph F. "Adoption of Aerial Survey Methods for Traffic Operation," Highway Research Record, No. 19 (January 1963), 47-52.
- Richter, Dennis M. "An Airphoto Index to Physical and Cultural Features in the Western United States," Photogrammetric Engineering, XXXIII (December 1967), 1402-1419.
- _____. "Sequential Urban Change," Photogrammetric Engineering, XXXV (August 1969), 764-770.
- _____. "Urban Photo Index for Eastern U.S.," Photogrammetric Engineering, XXXVII (January 1971), 54-66.

- Rinker, Jack N. "Environmental Analysis: A Challenge to the Remote Sensing Community," in Papers from the 35th Annual Meeting. Falls Church, Virginia: American Society of Photogrammetry, 1969, 55-96.
- _____, and R. E. Frost. "Environmental Analysis and Remote Sensing," in Environmental Analysis by Remote Sensing. Section 1, Fort Collins: Colorado State University, 1968, 1-152.
- Risley, Edward M. "Evaluation of Photo-Mosaic of Western Peru," in Useful Applications of Earth Oriented Satellites: Forestry-Agriculture-Geography. Washington, D.C.: National Academy of Sciences, 1969, 63-65.
- Roach, John T. "Cornell Aerial Photo Inventories of Urban Land Use and Natural Resources," in Papers from the 36th Annual Meeting. Falls Church Virginia: American Society of Photogrammetry, 1970, 351-362.
- _____. "Cornell Aerial Photo Inventories of Urban Land Use and Natural Resources," Photogrammetric Engineering, XXXVI (June 1970), 595.
- Roberts, Paul. "Using New Methods in Highway Location," Photogrammetric Engineering, XXIII (June 1957), 563-569.
- Robinove, Charles J. "Infrared Photography and Imagery in Water Resources Research," Journal American Water Works Association, LVII (July 1968), 834-840.
- _____. "Panel Discussion-Marine Pollution," in Proceedings of the Annual North Eastern Regional Antipollution Conference. Providence: University of Rhode Island, 1969, 4-11.
- Roscoe, Hohn H., et al. "Photo Interpretation in Geography," in Manual of Photographic Interpretation. Edited by Robert N. Colwell. Falls Church, Virginia: American Society of Photogrammetry, 1960, 735-792.
- Rosby, Stig A. "Remote Sensing with Microwave Radiometry," in Environmental Analysis by Remote Sensing. Section 4, Fort Collins: Colorado State University, 1968, 1-24.
- Rudd, R. D. and R. M. Highsmith, Jr. The Use of Air Photo Mosaics as Simulators of Spacecraft Photography in Land Use Mapping. Technical Letter NASA-194, Washington, D.C.: U. S. Geological Survey, 1970.
- Ruggles, F. H., Jr. "A Thermal Survey of the Connecticut River Estuary," in Second Annual Earth Resources Aircraft Program Status Review. Vol. III, Part 41, Houston, Texas: Manned Spacecraft Center, 1969, 1-12.
- Russell, J. A., F. W. Foster, and K. C. McMurray. "Some Applications of Aerial Photographs in Geographic Inventory," in Papers of the Michigan Academy of Science, Arts, and Letters, XXIX (1943), 315-334.
- Sabol, Joseph. "The Relationships Between Population and Radar-Derived Area of Urban Places," in The Utility of Radar and Other Remote Sensors in Thematic Land Use Mapping from Spacecraft, Annual Report. Interagency Report NASA-140, Washington, D.C.: U. S. Geological Survey, 1969, 46-74.

- Sakamoto, R. and M. Hosoda. "An Example of Traffic Current Analysis," Journal of the Japan Society of Photogrammetry, XIII (No. 3, 1969).
- Savis, R. "The Preparation of Large-Scale Maps by Photogrammetric Methods for Municipal Uses," Geodeticky A Kartograficky Obzor (Czechoslovakia), XII (No. 8, 1966).
- Schepis, Eugene L. "Datamap, A Practical Remote Sensing Application," Journal of Remote Sensing, I (January/February 1970), 15-17.
- Scher, Marvin B. "Orthophotomaps for Urban Areas," Surveying and Mapping, XXIX (September 1969), 413-421.
- Scherz, J. P. "Aerial Photographic Techniques in Pollution Detection." Unpublished Ph.D. dissertation, Madison: University of Wisconsin, 1967.
- Schneider, Clarke H. P. Material Identification in Urban Areas from Gray Tone Variations in Multispectral Photography. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1967.
- Schneider, William J. "Color Photographs for Water Resources Studies," Photogrammetric Engineering, XXXIV (March 1968), 257-263.
- Schwarz, David E., et al. The Construction of Thematic Land Use Maps with Spacecraft Photography. Interagency Report NASA-170, Washington, D.C.: U. S. Geological Survey, 1969.
- Senger, Leslie W., III. An Application of the Concepts of the Los Angeles Residential Environment Study to the Ontario-Upland Region of California. Addendum to Interagency Report NASA-153, Washington, D.C.: U. S. Geological Survey, 1969.
- Sherz, J. P. "Aerial Photography: A Promising Tool for Pollution Control," Industrial Hygiene and Medicine, (March 1968), 33-36.
- Sibert, W. Application of Remote Sensor Data to Cartographic Programs. Technical Letter NASA-51, Washington, D.C.: U. S. Geological Survey, 1966.
- Silberman, Leo. "Sociogrammetry," Photogrammetric Engineering, XXV (June 1959), 419-423.
- Silvestro, Frank B. "Remote Sensing Analysis of Water Quality," Journal Water Pollution Control Federation, XLII (April 1970), 553-561.
- _____, and K. R. Piech. Development of Aerial Photography as an Aid to Water Quality Management. Final Report VT-2614-0-1, Cornell Aeronautical Laboratory, January 1969.
- Simonett, David S. "Possible Geographic Research with Orbiting Radars: A Review of Recent Studies," Annals of the Association of American Geographers, LVII (December 1967), 804.

- Simonett, David S. "Thematic Land-Use Mapping with Spacecraft Photography and Radar," in Earth Resources Aircraft Program Status Review. Vol. I, Part 8, Houston, Texas: Manned Spacecraft Center, 1968, 1-20.
- _____. "Multisite Study of the Utility of Polypolarization Radar in the Detection and Identification of Selected Cultural Features," in Earth Resources Aircraft Program Status Review. Vol. I, Part 8A, Houston, Texas: Manned Spacecraft Center, 1968, 1-4.
- _____, et al. "The Utility of Radar and Other Remote Sensors in Thematic Land-Use Mapping from Spacecraft," Annual Report, Geographic Applications Program. Washington, D.C.: U. S. Geological Survey, 1968.
- _____, and Center for Research, Inc. "Thematic Land Use Mapping: Some Potentials and Problems," in Second Annual Earth Resources Aircraft Program Status Review. Vol. I, Part 13, Houston, Texas: Manned Spacecraft Center, 1969, 1-43.
- _____, and Floyd M. Henderson. On the Use of Space Photography for Identifying Transportation Routes: A Summary of Problems. Interagency Report NASA-171, Washington, D.C.: U. S. Geological Survey, 1969.
- _____, Floyd M. Henderson, and Dwight D. Egbert. "On the Use of Space Photography for Identifying Transportation Routes: A Summary of Problems," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1970, 855-877.
- Simpson, Robert B. "Radar, Geographic Tool," Annals of the Association of American Geographers, LVI (March 1966), 80-96.
- _____. Geographic Evaluation of Radar Imagery of New England. Interagency Report NASA-63, Washington, D.C.: U. S. Geological Survey, 1969.
- _____. Line-Scan vs Optical Sensors for Discrimination of Built-Up Areas. Paper No. 2, Project in Remote Sensing, Hanover, New Hampshire: Department of Geography, Dartmouth College, 1970.
- _____. "APQ/97 Imagery of New England: A Geographic Evaluation," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1970, 909-926.
- Smith, John T. (ed.). Manual of Color Aerial Photography. Falls Church, Virginia: American Society of Photogrammetry, 1968.
- Socite Geotechnip. Manuel de Photo-Interpretation. Paris: Editions Technip, 1970.
- Soot, Siim. The Identification of Road Surfacing Materials. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1967.
- Spelt, J. "Downtown Toronto: A Look at an Air Photo," Canadian Geographer, X (1966), 184-189.
- Spurr, S. H. Photogrammetry and Photo Interpretation. New York: The Ronald Press, Inc., 1960.

- Stallard, Alvis H. and Ray R. Bieger. "Evaluation of Color Aerial Photography in Some Aspects of Highway Engineering," Highway Research Record, (1966), 27-38.
- St-Arnaud, R. "The Base Map of Quebec," Unpublished Ph.D. dissertation, Quebec: Laval University, 1968.
- Stingelin, Ronald W. "Operational Airborne Thermal Imaging Surveys," Geophysics, XXXIV (October 1969), 760-771.
- Stoeckler, E. G. Use of Color Aerial Photography for Pavement Evaluation Studies in Maine. Final Report, Materials and Research Division, Maine State Highway Commission, November 1968.
- Stokes, George A. "The Aerial Photograph: A Key to the Cultural Landscape," Journal of Geography, XLIX (1950), 32-40.
- _____. "An Application of Aerial Photographs to Field Research in Cultural Geography," Photogrammetric Engineering, XX (December 1954), 802-804.
- Stone, Kirk H. "Aerial Photographic Interpretation of the Anchorage Area, Alaska," Geographical Review, XXXVIII (1948), 465-474.
- _____. "Air Photo Interpretation Procedures," Photogrammetric Engineering, XXII (March 1956), 123-132.
- _____. "A Guide to the Interpretation and Analysis of Aerial Photos," Annals of the Association of American Geographers, LIV (September 1964), 318-328.
- Strandberg, Carl H. "Analysis of Thermal Pollution from the Air," Photogrammetric Engineering, XXIX (July 1963), 656-671.
- _____. "Water Quality Analysis," Photogrammetric Engineering, XXXII (March 1966), 234-248.
- _____. "Water Pollution Reconnaissance," in Aerial Discovery Manual. Chapter 16, New York: John Wiley and Sons, Inc., 1967, 195-205.
- _____. "Color Aerial Photography for Water Supply and Pollution Control Reconnaissance," in Proceedings of the Third Annual Conference, Remote Sensing of Air and Water Pollution. Section 13, Anaheim, California: North American Aviation, Inc., 1967, 1-10.
- _____. "Water Pollution Analysis," in Manual of Color Aerial Photography. Edited by John T. Smith. Falls Church, Virginia: American Society of Photogrammetry, 1968, 420-421.
- Subcommittee on NASA Oversight, George P. Miller-Chairman (Calif). Earth Resources Satellite System. Washington, D.C.: U. S. Government Printing Office, 1968.

- Sundstrom, Erik. "Wide-Angle Infrared Camera for Industry and Medicine," Applied Optics, VII (September 1968), 1763-1768.
- Syrakis, Thomas A. and John R. Platt. Aerial Photographic Parking Study Techniques. Stark County, Ohio: Stark Co. Area Transportation Study, No Date.
- Tamburri, Thomas N. "California's Aerial Photography Inventory of Freeways," Highway Research Record, No. 19 (January 1963), 17-23.
- Thomas, Edwin N. and Duane F. Marble. "The Use of Remote Sensors in Urban Information Systems," in Five Papers on Remote Sensing and Urban Information Systems. Technical Report No. 1, Washington, D.C.: U. S. Geological Survey, 1966, 10-15.
- Thompson, Morrell. "The Utilization of an Infrared Thermal Mapping System for Urban Planning," in Five Papers on Remote Sensing and Urban Information Systems. Technical Report No. 1, Washington, D.C.: U. S. Geological Survey, 1966, 16-24.
- Thompson, Morris M. "Mapping for Changing Environment," Journal of Surveying and Mapping Division, XCV (October 1969), 35-48.
- Thrower, Norman J., Robert H. Mullens, and Leslie W. Senger. "Analysis of NASA Color Infrared Photography of Los Angeles," in Mission 73, Summary and Data Catalog. Technical Letter NASA-132, Houston, Texas: Manned Spacecraft Center, 1968, 259-266.
- _____. "Report on Southwestern United States Land Use Mapping from Gemini Satellite Photography," in Final Report of the AAG Commission on Geographic Applications of Remote Sensing for May 1968-May 1969. Washington, D.C.: Association of American Geographers, 1969.
- Thrower, Norman J. and Leslie W. Senger. Satellite Photography as a Geographic Tool for Land Use Mapping of the Southwestern United States, 1 July 1968-31 January 1970. Technical Report 69-3, Washington, D.C.: U. S. Geological Survey, 1970.
- Thurston, Roy F. "West Coast Interim Revision," in Papers from the 1969 ASP-ACSM Convention. Falls Church, Virginia: American Society of Photogrammetry, and Washington, D.C.: American Congress on Surveying and Mapping, 1969, 327-340.
- Tiedemann, Herbert A. "Angel's Eye View of Arizona," Arizona Highways, LXV (April 1969), 10-31.
- Tobler, Waldo R. "Evidence of the Central Place Theory in the Nile Delta," in Earth Resources Surveys from Spacecraft. Vol. I, Part D, Fort Belvoir, Virginia: U. S. Army Corps of Engineers, 1967, 28-29.
- _____. Satellite Confirmation of Settlement Size Coefficient. Inter-agency Report NASA-151, Washington, D.C.: U. S. Geological Survey, 1968.
- Treiterer, Joseph and James I. Taylor. "Traffic Flow Investigations by Photogrammetric Techniques," Highway Research Record, No. 142 (1966), 1-12.

- Trorey, L. G. Handbook of Aerial Mapping and Photogrammetry. Cambridge: Cambridge University Press, 1950.
- Turpin, Robert D. "Evaluation of Photogrammetry and Photographic Interpretation for Use in Transportation Planning," Photogrammetric Engineering, XXX (January 1964), 124-130.
- _____, and Clyde E. Lee. "Use of Photogrammetric Methods in Traffic Studies," Photogrammetric Engineering, XXVII (March 1961), 79-83.
- Underwood, Richard W. "Color Photography from Manned Spacecraft," in New Horizons in Color Aerial Photography. Falls Church, Virginia: American Society of Photogrammetry, and Washington, D.C.: Society of Photographic Scientists and Engineers, 1969, 1.
- U. S. Army Corps of Engineers. Earth Resource Surveys from Spacecraft. Vols. I-II, Fort Belvoir, Virginia: U. S. Army Corps of Engineers, 1967.
- U. S. Department of the Army, Navy, and Air Force. Photographic Interpretation Handbook. Washington, D.C.: U. S. Government Printing Office, 1954.
- U. S. Geological Survey New Release. Space Photo Woven into (Topo) Map of Phoenix, Arizona Area. Washington, D.C.: U. S. Geological Survey, March 1970.
- Van Lopik, Jack R., Albert E. Pressman, and Roger L. Ludlum. "Mapping Pollution with Infrared," Photogrammetric Engineering, XXXIV (July 1968), 561-564.
- Veress, S. A. "Application of Photogrammetry to Air Pollution Research," in Papers from the 1969 ASP-ACSM Fall Convention. Falls Church, Virginia: American Society of Photogrammetry, and Washington, D.C.: American Congress on Surveying and Mapping, 1969, 341-347.
- _____. "Determination of Concentration of Polluted Air by Photogrammetry," Photogrammetric Engineering, XXXVI (June 1970), 596.
- _____. "Determination of Concentration of Polluted Air by Photogrammetry," Papers from the 36th Annual Meeting. Falls Church, Virginia: American Society of Photogrammetry, 1970, 729-747.
- _____. "Air Pollution Research," Photogrammetric Engineering, XXXVI (August 1970), 340-348.
- _____, and Harry P. Jones. "Airport Design Application," Photogrammetric Engineering, XXXIV (September 1968), 973-977.
- Vinogradov, B. V. "Space Photography for the Geographic Study of the Earth," Bulletin of the All Union Geographic Society, No. 2 (1966), 101-111.
- _____. "Main Trends in the Application of Airphoto Methods to Geographical Research in the U.S.S.R.-A Review of Publications, 1962-1964," Photogrammetria, XXIII (May 1968), 77-94.

- Wagner, F. A., Jr. and A. D. May, Jr. "Use of Aerial Photography in Freeway Traffic Operations Studies," Highway Research Record, No. 19 (January 1963), 24-34.
- Wagner, Robert R. "Using Air Photos to Measure Changes in Land Use Around Highway Interchanges," Photogrammetric Engineering, XXIX (July 1963), 654-649.
- Walker, F. Geography from the Air. London: Methuen and Co., 1953.
- Walsh, William T., Jr. "Aerial Photographs in Civil Defense," Photogrammetric Engineering, XX (June 1954), 417-419.
- Waltz, Donald. "Technological Base for Planning of Spacecraft Missions to Obtain Data on the Earth's Resources." Presented before the Fifth Annual AIAA Meeting, Earth Resources Session, Philadelphia, Pennsylvania, October 21-25, 1968. (mimeographed.)
- Weiss, M. "Some Results of Inflight Testing an Infrared Sensor as a Clear Air Turbulence Detector, Part I," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1970, 303-307.
- Welch, Robert I. "Remote Sensing Systems in Water Quality Control Programs," in Proceedings of the Third Annual Conference, Remote Sensing of Air and Water Pollution. Section 7, Anaheim, California: North American Aviation, Inc., 1967, 1-20.
- Wellar, Barry S. Generation of Housing Quality Data from Multiband Aerial Photographs. Interagency Report NASA-119, Washington, D.C.: U. S. Geological Survey, 1968.
- _____. "On Applications of Aerial Infrared Imagery," Annals of the Association of American Geographers, LVIII (June 1968), 411-413.
- _____. Thermal Infrared Imagery in Urban Studies. Interagency Report NASA-135, Washington, D.C.: U. S. Geological Survey, 1968.
- _____. "Utilization of Multiband Aerial Photographs in Urban Housing Quality Studies," in Proceedings of the Fifth Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1968, 913-926.
- _____. Hyperaltitude Photography as a Data Base in Urban and Transportation Research. Evanston, Illinois: Remote Sensing Laboratory, Northwestern University, 1968.
- _____. "A Program for Selection and Acquisition of Housing-Environmental Data." Unpublished Ph.D. dissertation, Evanston, Illinois: Northwestern University, 1969.
- _____. "Recent Developments in Urban Data Generation via Remote Sensing Techniques," in Proceedings Urban and Regional Information Systems Association. Kent, Ohio: Kent State University, 1969, 258-277.

- Wellar, Barry S. "The Role of Space Photography in Urban and Transportation Data Series," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1970, 831-854.
- _____, and Duane F. Marble. Extraction of Urban Data from High and Low Resolution Images. Evanston, Illinois: Remote Sensing Laboratory: Northwestern University, 1969.
- Wells, Robert F. "Application of Air Photo Interpretation Techniques to Problems in Urban and Regional Planning." Unpublished Master's thesis, Stillwater, Oklahoma: Oklahoma State University, 1969.
- Wert, S. L. "A System for Using Remote Sensing Techniques to Detect and Evaluate Air Pollution Effects on Forest Stands," in Proceedings of the Sixth International Symposium on Remote Sensing of Environment. Ann Arbor: University of Michigan, 1970, 1169-1178.
- Westinghouse Electric Corporation. Side Look Radar. Baltimore, Maryland: Westinghouse Electric Corp., 1967.
- Willow Run Laboratories. Peaceful Uses of Earth-Observation Spacecraft. Ann Arbor: University of Michigan, 1966.
- Wilson, John E. Sensor Detection Capabilities Study. Interagency Report NASA-143, Washington, D.C.: U. S. Geological Survey, 1968.
- _____. Sensor Detection Capabilities Study. Geological Survey Circular 616, Washington, D.C.: U. S. Geological Survey, 1969.
- Witenstein, Matthew M. "The Application of Photo-Interpretation to Urban Area Analysis," Photogrammetric Engineering, XVIII (June 1952), 490-492.
- _____. "Photo-Sociometrics-The Application of Aerial Photographs to Urban Administration and Planning Problems," Photogrammetric Engineering, XX (June 1954), 419-427.
- _____. "Uses and Limitations of Aerial Photography in Urban Analysis and Planning," Photogrammetric Engineering, XXI (September 1955), 566-572.
- _____. "A Report on Application of Aerial Photography to Urban Land Use Inventory, Analysis, and Planning," Photogrammetric Engineering, XXII (September 1956), 656-663.
- _____. "A Review of 'Aerial Photographic Interpretation and the Social Structure of the City'", Photogrammetric Engineering, XXIII (March 1957), 97-98.
- Withers, Ben C. "Some Uses of Aerial Photographs in Urban Analysis," The Professional Geographer, XIII (September 1961), 16-18.
- Witmer, Richard E. A Multispectral Survey of a Coastal-Intracoastal Environment. Technical Report No. 5, Washington, D.C.: U. S. Geological Survey, 1968.

Witmer, Richard E. Tellico Test Site Land Use Map. Technical Report No. 69-4, Washington, D.C.: U. S. Geological Survey, 1970.

Wobber, Frank J. Environmental Studies Using Gemini Photography. Technical Report No. 48-68-002, Bethesda, Maryland: International Business Machines Corp., 1968.

_____. "Applications of Scientific Space Imagery," Signal (October 1968) 1-8.

_____. "An Appraisal of the Contribution of Orbital Photography to Problems of Environmental Quality," in New Horizons in Color Aerial Photography. Falls Church, Virginia: American Society of Photogrammetry and Washington, D.C.: Society of Photographic Scientists and Engineers, 1969, 263-279.

_____. "Environmental Studies Using Earth Orbital Photography," Photogrammetria, XXIV (June 1969), 107-165.

_____. "Environmental Studies Using Orbital Photography," Photogrammetria, XXIV (Special Volume, 1969), 107-165.

_____. "Orbital Photos Applied to the Environment," Photogrammetric Engineering, XXXVI (August 1970), 852-864.

Wohl, Martin. "Vehicle Speeds and Volumes Using Sonne Stereo Continuous Strip Photography," Traffic Engineering, XXIX (January 1959), 14-19.

_____, and S. M. Sickie. "Continuous Strip Photography-An Approach to Traffic Studies," Photogrammetric Engineering, XXV (June 1959), 397-403.

Wood, Robert C. "Rediscovery of the American City," Technology Review, LXX (January 1968), 47-51.

Woodward, Louis A. "Photogrammetry in City Planning Operations," Photogrammetric Engineering, XX (June 1954), 520-523.

Wray, James R., et al. "Photointerpretation in Urban Analysis," in Manual of Photographic Interpretation. Edited by John T. Smith. Falls Church, Virginia: American Society of Photogrammetry, 1960, 667-716.

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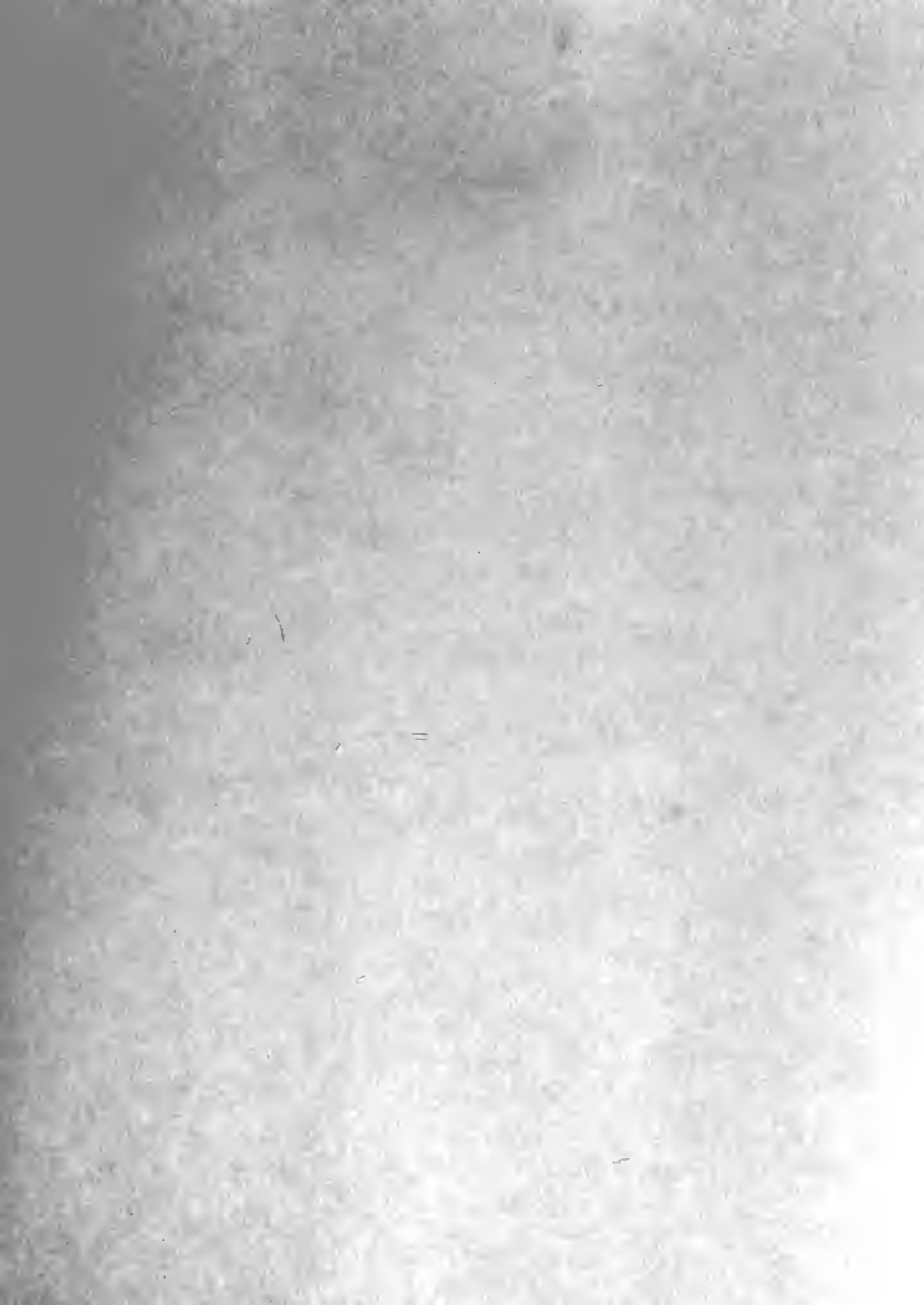
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